

REQUEST FOR RECONSIDERATION

Claims 11-21 remain active in this application.

The claimed invention is directed to an offshore pipe comprising a layer of a syntactic polyurethane comprising a polyol component which comprises **a polyetherpolyol** and an oil based on C₆₋₂₅ fatty acids and comprising hollow microspheres.

Applicants wish to thank examiner Kashnikow and supervisory patent examiner Dye for the helpful and courteous discussion held with their U.S. representative on June 22, 2010. At that time, applicants' U.S. representative discussed the failure of the combined disclosures to suggest a polyol component comprising **a polyetherpolyol** and an oil based on fatty acids. The following is intended to expand upon the discussion with the examiner.

Offshore pipes, used to transport oil through the ocean depths, are benefited by thermal insulation properties which have heretofore been achieved by inclusion of a hollow microfillers. However, such microfillers can lead to a reduction in hydrolytic stability as well as unsatisfactory low-temperature flexibility. Accordingly, offshore pipes having good thermal insulation properties, hydrolytic stability and low temperature flexibility are sought.

The claimed invention addresses his problem by providing an offshore pipe comprising a layer of a syntactic polyurethane comprising a polyisocyanate component, a polyol component which comprises **a polyetherpolyol** and an oil based on C₆₋₂₅ fatty acids and hollow microspheres. Such an offshore pipe is nowhere disclose or suggested in the cited references.

The rejection of claims 11-21 under 35 U.S. C. §103(a) over Grimm et al. U.S. 6,387,447 in view of Kitagawa et al JP 63-264676 is respectfully traversed.

Applicants wish to thank examiner Kashnikow for providing applicants' U.S. representative a copy of an English language translation of Kitagawa et al. during the meeting of June 22, 2010.

None of the cited references, alone or in combination suggest that the claimed polyol component containing a polyetherpolyol and an oil based on C₆₋₂₅ fatty acids in a polyurethane composition layer of an offshore pipe.

Grimm et al. has been cited for a disclosure of a pipe comprising a syntactic polyurethane layer comprising a polyol having an OH number of 36 as well as castor oil, citing example 1. Castor oil is present as a result of its use as a carrier for a zeolite component. There is no specific reason to incorporate castor oil into the polyurethane other than for the introduction of the zeolite. Accordingly, as noted in the official action there is no disclosure of the claimed content of 10-90 wt.% of oil based on fatty acid.

Kitagawa et al disclose a polyurethane coated cement pipe having impact, chemical, salt water and corrosion resistance (page 3, lines 3-7 of English translation). The polyol is described on page 6 as obtained by reacting a) castor oil, b) a divalent alcohol and c) a trivalent or higher polyhydric alcohol, with d) ε-caprolactone (lines 1-8 of English translation). The reaction with ε-caprolactone is identified as a **transesterifying** reaction beginning at the bottom of page 7:

“The polyol as the component (A) of the present invention is obtained by transesterifying the components (a), (b), and (c) at 200-250°C, if necessary, using a basic catalyst and applying a ring-opening addition reaction to the component d) as about 200°C.”

There is no disclosure of a polyetherpolyol component.

Paragraph 13 of the official action asserts that it would have been obvious to modify the coated pipes of Grimm et al **with the polymer of Kitagawa et al** because the pipe of Grimm et al. which are able to withstand pressures of 50 bar and temperatures above 120°C would benefit from the increased physical, chemical and salt water resistance of the coating of Kitagawa et al.

However, the polymer of Kitagawa et al fails to disclose or suggest a polyol component of a polyetherpolyol. The transesterified polyol reacted with ϵ -caprolactone component of Kitagawa et al. is not a polyetherpolyol. Thus the combination of the pipe of Grimm et al. with the polymer of Kitagawa et al. fails to render obvious the claimed invention.

Moreover, as the polymer of Kitagawa et al. is described as possessed of such physical, chemical and salt water resistance, it would not have been obvious to modify the polymer of Kitagawa et al. to include a polyetherpolyol, as claimed.

As the cited combination of references fails to suggest a microsphere containing polyurethane in which the polyol component comprises a polyetherpolyol and an oil based on fatty acids, the claimed invention would not have been obvious from these references and accordingly, withdrawal of the rejection under 35 U.S.C. §103(a) is respectfully requested.

Applicants submit that this application is now in condition for allowance and early notification of such action is earnestly solicited.

Respectfully submitted,

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